IN THE CLAIMS

1. (Original) An apparatus for measuring viscosity or related properties of a plurality of fluid samples, the apparatus comprising:

a three axis robot;

at least one tube providing a flow path for the plurality of fluid samples, the tube having a pre-defined length and a substantially uniform inner diameter over at least a portion of the pre-defined length, the at least one tube being translatable by the three axis robot;

at least one reservoir for containing the fluid samples associated with each tube via a hub, the reservoir in fluid communication with the tube; and

a device for determining the volumetric flow rate as the fluid sample flows out of the reservoir and through the tube.

2. (Original) The apparatus of claim 1, further comprising a mechanism for filling the at least one reservoir selected from a vacuum source, a single or multiple-channel pipette, or combinations thereof.

3. (Original) The apparatus of claim 1, wherein the device for determining the volumetric flow rate comprises sensors locate at upstream and downstream positions along each reservoir.

4. (Original) The apparatus of claim 3, wherein the sensors comprise a light source and a light detector, the light detector generating a signal in response to a momentary interruption of light form the light source.

5. (Original) The apparatus of claim 1, wherein the hub is a luer hub.

6. (Original) A method of screening fluid samples comprising:

a) providing a plurality of fluid samples in a plurality of wells;

b) locating a tube in fluid communication with a first fluid sample with a three axis robot, wherein the tube is associated via a hub with a reservoir that is in fluid communication with the tube;

c) filling the reservoir with the first fluid sample;

d) flowing the first fluid sample out of the reservoir through the tube;

e) determining the volumetric flow rate as the first fluid sample is flowed out of the reservoir;

f) relating the volumetric flow rate to viscosity or other property for the first fluid sample; and

g) repeating steps (b) through (f) for each of the plurality of fluid samples.

7. (Original) The method of claim 6, wherein the determining step comprises measuring the times required for a meniscus in each reservoir to travel a predetermined distance.

8. (Original) The method of claim 7, further comprising computing viscosities of each of the fluid samples from the meniscus travel times.

9. (Original) The method of claim 7, further comprising estimating molecular weights of the fluid samples from the meniscus travel times.

10. (Original) The method of claim 6, wherein an upstream and a downstream detector are utilized to determine the volumetric flow rate.

11. (Withdrawn) An apparatus for measuring viscosity of a plurality of fluid samples, the apparatus comprising:

a three-axis robot adapted for translation between the plurality of fluid samples;

at least one tube providing a flow path for each of the plurality of fluid samples, the tube having a pre-defined length and a substantially uniform inner diameter over at least a portion of the pre-defined length, the at least one tube being translatable by the three axis robot;

at least one reservoir for containing the fluid samples associate with each tube via a hub, the reservoir in fluid communication with the tube;

a mechanism for transferring each of the plurality of fluid samples to the reservoir; and

a pressure sensor in the reservoir for determining pressure in the reservoir as the fluid sample flows out of the reservoir.

12. (Withdrawn) The apparatus of claim 11, wherein the hub is a luer hub.

13. (Withdrawn) The apparatus of claim 11, wherein the three axis robot comprises at least two arms capable of working in parallel.

14. (Withdrawn) A method for measuring viscosity of a plurality of fluid samples, comprising the steps of:

a) locating at least one tube in fluid communication with a first fluid sample with a three axis robot, wherein the tube is associated with a reservoir that is in fluid communication with the at least one tube;

b) filling the reservoir with a first fluid sample;

c) flowing the first fluid sample out of the reservoir;

d) determining the pressure in the reservoir as the first fluid sample is flowed out of the reservoir;

e) calculating viscosity or related property for the first fluid sample; and

f) repeating steps (c) through (e) for each of the plurality of fluid samples.

15. (Withdrawn) The method of claim 14, further comprising measuring the molecular weight of each fluid sample.

16. (Withdrawn) The method of claim 14, wherein the fluid samples include a polymer.